

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Lei Yu

Serial No.: Unknown

Filed: Concurrently Herewith

For: MU OPIOID RECEPTOR METHODS (as amended)

Group Art Unit: Unknown

Prior Examiner: R. Landsman

Atty. Dkt. No.: INDA:002USD1/GNS

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NUMBER EL611000538

DATE OF DEPOSIT April 24, 2001

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Applicant respectfully submits this Preliminary Amendment in the above-referenced case.

Consideration of this case in view of the amendment made herein is respectfully requested.

AMENDMENT

In the Specification:

Please amend the specification as follows:

At page 1, please replace the existing title with --Mu Opioid Receptor Methods--.

At page 2, please insert the following paragraph:

--This application is a divisional of co-pending patent application Serial No. 08/120,601
filed July 13, 1993.--

In the Claims:

Please cancel claims 1-17, without prejudice or disclaimer.

Please add the following claims:

- 18. A process for screening a candidate substance for its ability to bind to an opioid receptor comprising:
- (a) providing a recombinant opioid receptor polypeptide encoded by a nucleic acid sequence comprising 25 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3;
 - (b) contacting the substance with the recombinant opioid receptor polypeptide; and
 - (c) detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide.
19. The process of claim 18, wherein the nucleic acid sequence comprises 40 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
20. The process of claim 19, wherein the nucleic acid sequence comprises 55 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
21. The process of claim 20, wherein the nucleic acid sequence comprises 70 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
22. The process of claim 21, wherein the nucleic acid sequence comprises SEQ ID NO:1 or SEQ ID NO:3.
23. The process of claim 22, wherein the nucleic acid sequence comprises SEQ ID NO:1.

24. The process of claim 22, wherein the nucleic acid sequence comprises SEQ ID NO:3.
25. The process of claim 20, wherein detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide involves measuring (i) binding ability; (ii) the ability of the recombinant opioid receptor polypeptide to bind the candidate substance; (iii) ability of candidate to activate ion channels in a cell membrane; or (iv) modulation of ion channels in the cell membrane.
26. The process of claim 20, wherein recombinant opioid receptor polypeptide is chimeric.
27. A process for screening a candidate substance for its ability to bind to an opioid receptor comprising:
 - (a) expressing a recombinant opioid receptor polypeptide encoded by a nucleic acid sequence comprising 25 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3;
 - (b) contacting the candidate substance with the recombinant opioid receptor polypeptide; and
 - (c) detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide.
28. The process of claim 27, wherein the nucleic acid sequence comprises 40 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
29. The process of claim 27, wherein the nucleic acid sequence comprises 55 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
30. The process of claim 27, wherein the nucleic acid sequence comprises 70 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
31. The process of claim 27, wherein the nucleic acid sequence comprises SEQ ID NO:1.

32. The process of claim 27, wherein the nucleic acid sequence comprises SEQ ID NO:3.
33. The process of claim 27, wherein recombinant opioid receptor polypeptide is chimeric.
34. A process for screening for an antagonist or agonist of an opioid receptor comprising:
 - (a) providing a recombinant opioid receptor polypeptide comprising the amino acid residue sequence of SEQ ID NO:2 or SEQ ID NO:4;
 - (b) contacting the substance with the recombinant opioid receptor polypeptide; and
 - (c) detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide.
35. The process of claim 34, wherein detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide involves measuring (i) binding ability; (ii) the ability of the recombinant opioid receptor polypeptide to bind the candidate substance; (iii) ability of candidate to activate ion channels in a cell membrane; or (iv) modulation of ion channels in the cell membrane.
36. The process of claim 34, wherein the recombinant opioid receptor polypeptide is chimeric.--

REMARKS

Herein, claims 1-17 are cancelled, without prejudice or disclaimer, and claims 18-37 are added. A copy of the pending claims is provided as Appendix A. Support for the new claims can be found in the Specification at least at pages 10, lines 11-21; page 15, lines 5-10; page 28, line 6-page 29, line 9; page 56, line 20 to page 67, line 16; page 73, lines 17-19. Applicant contends that no new matter has been added.

The filing fee has been calculated after amendment of the claims by the preliminary amendment. Should any additional fees under 37 C.F.R. §§ 1.16 to 1.21 be required, the

Assistant Commissioner is hereby authorized to deduct said fees from Fulbright & Jaworski
Deposit Account No. 50-1212/10020907/GNS.

Respectfully submitted,



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**APPENDIX A
PENDING CLAIMS**

- 18. A process for screening a candidate substance for its ability to bind to an opioid receptor comprising:
- (a) providing a recombinant opioid receptor polypeptide encoded by a nucleic acid sequence comprising 25 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3;
 - (b) contacting the substance with the recombinant opioid receptor polypeptide; and
 - (c) detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide.
19. The process of claim 18, wherein the nucleic acid sequence comprises 40 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
20. The process of claim 19, wherein the nucleic acid sequence comprises 55 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
21. The process of claim 20, wherein the nucleic acid sequence comprises 70 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
22. The process of claim 21, wherein the nucleic acid sequence comprises SEQ ID NO:1 or SEQ ID NO:3.
23. The process of claim 22, wherein the nucleic acid sequence comprises SEQ ID NO:1.
24. The process of claim 22, wherein the nucleic acid sequence comprises SEQ ID NO:3.
25. The process of claim 20, wherein detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide involves measuring (i) binding ability; (ii) the ability of the recombinant opioid receptor polypeptide to bind the candidate

substance; (iii) ability of candidate to activate ion channels in a cell membrane; or (iv) modulation of ion channels in the cell membrane.

26. The process of claim 20, wherein recombinant opioid receptor polypeptide is chimeric.
27. A process for screening a candidate substance for its ability to bind to an opioid receptor comprising:
 - (a) expressing a recombinant opioid receptor polypeptide encoded by a nucleic acid sequence comprising 25 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3;
 - (b) contacting the candidate substance with the recombinant opioid receptor polypeptide; and
 - (c) detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide.
28. The process of claim 27, wherein the nucleic acid sequence comprises 40 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
29. The process of claim 27, wherein the nucleic acid sequence comprises 55 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
30. The process of claim 27, wherein the nucleic acid sequence comprises 70 contiguous nucleotides of SEQ ID NO:1 or SEQ ID NO:3.
31. The process of claim 27, wherein the nucleic acid sequence comprises SEQ ID NO:1.
32. The process of claim 27, wherein the nucleic acid sequence comprises SEQ ID NO:3.
33. The process of claim 27, wherein recombinant opioid receptor polypeptide is chimeric.

34. A process for screening for an antagonist or agonist of an opioid receptor comprising:
- (a) providing a recombinant opioid receptor polypeptide comprising the amino acid residue sequence of SEQ ID NO:2 or SEQ ID NO:4;
 - (b) contacting the substance with the recombinant opioid receptor polypeptide; and
 - (c) detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide.
35. The process of claim 34, wherein detecting the ability of the candidate substance to bind to the recombinant opioid receptor polypeptide involves measuring (i) binding ability; (ii) the ability of the recombinant opioid receptor polypeptide to bind the candidate substance; (iii) ability of candidate to activate ion channels in a cell membrane; or (iv) modulation of ion channels in the cell membrane.
36. The process of claim 34, wherein the recombinant opioid receptor polypeptide is chimeric.--